Devthane® 359

Polyurethane

PRODUCT DESCRIPTION

A high build, high performance, two-component chemically-cured aliphatic urethane gloss finish.

INTENDED USES

For use on properly prepared steel, galvanized, aluminum and properly prepared concrete floors. Ideal for use on exterior or interior structural steel, piping, metal buildings, conveyors, pumps, storage tank exteriors, wind turbine towers, motors, machinery, and transportation vehicles.

Can also be used in the hard service areas of food processing plants, dairies, schools, restaurants, hospitals, correctional facilities, factories, stadiums, arenas, and amusement parks.

PRACTICAL INFORMATION FOR DEVTHANE 359

Color	White, Black and custom colors
Gloss Level	Gloss
Volume Solids	60%± 2%
Typical Thickness	4-6 mils (100-150 microns) dry equivalent to 6.7-10 mils (167-250 microns) wet
Theoretical Coverage	192 sq.ft/US gallon at 5 mils d.f.t and stated volume solids 4.80 m²/liter at 125 microns d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Airless Spray, Roller, Air Spray, Brush

Drying Time

			Overcoating interval with self	
Temperature	**Touch Dry**	**Hard Dry**	*Minimum*	*Maximum*
41°F (5°C)	*[1]	14 hours	8 hours	2 weeks
59°F (15°C)	*[1]	9 hours	5 hours	2 weeks
77°F (25°C)	*[1]	5 hours	3 hours	2 weeks

[1] Not applicable

REGULATORY DATA

Flash Point (Typical)	Part A 81°F (27°C); Part B 81°F (27°C); Mixed 81°F (27°C)	
Product Weight	10.3 lb/gal (1.24 kg/l)	
VOC	2.83 lb/gal (340 g/lt)	EPA Method 24

See Product Characteristics section for further details

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SURFACE PREPARATION

Surfaces must be dry, clean, free of oil, grease, form release agents, curing compounds, laitance, other foreign matter and be structurally sound. Remove all loose paint, mortar spatter, mill scale, and rust.

New Surfaces

Steel:
Abrasive blast to minimum SSPC-SP6 or ISO8501-1:2007 Sa2½ commercial blast. The blast profile should be jagged rather than “peened” and between 1.5 to 2.5 mils (38-62 microns). After blasting, vacuum or blow off all abrasive dust and ensure surface remains clean before painting.

To ensure optimum appearance, any primer or undercoat should be smooth and free of any surface defects such as runs, dry spray or heavy orange peel. Prime using: Devran 224HS, Bar-Rust 231, Bar-Rust 235 or Bar-Rust 233H.

Galvanized Steel and Aluminum
Remove dirt and oils by solvent cleaning or with Devprep 88 Cleaner or other suitable cleaner followed by a thorough water rinsing. Prime using an approved primer. For direct to metal use, brush blast to a standard similar to SSPC-SP-7 or ISO 8501-1:2007 Sa1 to create a surface profile. Prime using: Devran 201H or Devran 203.

Concrete Block:
Remove loose aggregate and repair voids. Fill with Devthane 359 or Bar-Rust 235, Bar-Rust 233H epoxies or Tru-Glaze-WB 4015 filler.

Concrete Floors, Poured Concrete:
Cure at least 30 days. Acid etch or abrasive blast slick, glazed concrete or concrete with laitance. Prime using: Devran 224HS, Bar-Rust 235, Bar-Rust 233H or Pre-Prime 167

Previously Painted Surfaces:
Old coatings should be tested for lifting or bleeding. If they are, they should be removed. Wash to remove contaminants. Rinse thoroughly with water and allow to dry. Dull glossy areas by light sanding. Remove all debris. Prime bare areas with primer specified under New Surfaces.

Drywall:
Prime with a premium acrylic latex vapor barrier primer sealer.

Fiberglass
Solvent wipe, scuff sand and solvent wipe again. Prime with Devran 201H epoxy.

APPLICATION

Mixing

Material is supplied in two containers as a unit. Always mix a complete unit in the proportions supplied. Once the unit has been mixed, it must be used within the working pot life specified.
(1) Agitate Base (Part A) with a power agitator.
(2) Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator.

Mix Ratio

4 part(s) : 1 part(s) by volume

Working Pot Life

41°F (5°C)	59°F (15°C)	77°F (25°C)
10 hours	9 hours	8 hours

Airless Spray	Recommended	Tip Range 15-19 thou (0.38-0.48 mm) Total output fluid pressure at spray tip not less than 3000 psi (211 kg/cm²) See Product Characteristics section for further details
Air Spray (Conventional)	Recommended	See Product Characteristics section for further details
Brush	Suitable	
Roller	Suitable	
Thinner	T-9 Thinner (or T-17 Thinner)	See Product Characteristics section for further details
Cleaner	T-9 Thinner	

Work Stoppages

Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with T-9 Thinner. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages work recommences with freshly mixed units.

Clean Up

Clean all equipment immediately after use with T-9 Thinner. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays. All surplus material and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.

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PRODUCT CHARACTERISTICS

21709_Advantages:

- Excellent gloss and color retention
- Excellent abrasion and chemical resistance
- Low VOC
- Easily applied by brush, roller or spray
- Wide color selection
- Excellent resistance to marring, chipping, and scratching
- High build requires less coats
- May be applied direct to metal (refer to surface preparation requirements)

Cure Acceleration: Urethane catalyst 070A000 may be used to accelerate cure at or below 40°F (5°C). The addition of one or two ounces per gallon will decrease the hard dry time by approximately one-third to one-half respectively at 40°F (5°C). The pot life will be reduced one-half to three-fourths.

Thinning is not normally required. However, depending on local VOC and air quality regulations, small amounts (5% or less) of T-9 Thinner may be added. Small amounts (5% or less) of T-17 Thinner may improve roller, brush or spray application. If local VOC and/or air quality regulations are not an issue, and depending on the individual set-up of the spray equipment, additional thinning may be allowed to obtain the desired individual finish.

Tint the appropriate base using industrial colorants.

For airless spray application: Ideally, fluid hoses should not be less than 3/8" ID and not longer than 50 feet to obtain optimum results. Longer hose length may require an increase in pump capacity, pressure, and/or thinning.

For air spray application: Use a professional grade conventional gun with a 0.070" (1.78mm) fluid tip or larger. Adjust fluid and air pressure to achieve a good spray pattern.
Devthane 359 reacts with atmospheric moisture, and as such when in the can should remain covered at all times. Failure to keep tin covered will result in skinning of paint and loss of pot life.

Care should be taken that proper and uniform film thicknesses are obtained. Brushing and rolling may require multiple coats to achieve correct film thickness and/or hiding.

The maximum operating temperature for Devthane 359 is 248ºF (120°C).

Exposure to continuous operating temperatures towards the maximum dry temperature resistance of this product may induce some discoloration.

Note: VOC values are typical and are provided for guidance purpose only. These may be subject to variation depending on factors such as differences in color and normal manufacturing tolerances.

Low molecular weight reactive additives, which will form part of the film during normal ambient cure conditions, will also effect VOC values determined using EPA Method 24.

SYSTEMS COMPATIBILITY

The following primers are recommended for Devthane 359:

Bar-Rust 231	Bar-Rust 233H
Bar-Rust 235	Cathacoat 302H
Cathacoat 302HB	Cathacoat 313
Cathacoat 303	Devran 203
Devran 201H	Devran 261QC
Devran 223	Tru-Glaze-WB 4015
Devran 224V	Tru-Glaze-WB 4030

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ADDITIONAL INFORMATION

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at www.international-pc.com:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage

Individual copies of these information sections are available upon request.

SAFETY PRECAUTIONS

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Material Safety Data Sheet and the container(s), and should not be used without reference to the Material Safety Data Sheet (MSDS) which International Protective Coatings has provided to its customers.

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

If in doubt regarding the suitability of use of this product, consult International Protective Coatings for further advice.

PACK SIZE	Unit Size	Part A		Part B	
		Vol	Pack	Vol	Pack
	1 US gal	0.8 US gal	1 US gal	0.2 US gal	1 US quart
	5 US gal	4 US gal	5 US gal	1 US gal	1 US gal
	For availability of other pack sizes contact International Protective Coatings				
SHIPPING WEIGHT (TYPICAL)	Unit Size	Part A		Part B	
	1 US gal	11.9 lb		1.5 lb	
	5 US gal	52.7 lb		13.2 lb	
STORAGE	Shelf Life	24 months minimum at 77°F (25°C). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.			

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